

Patent Claims

1. A gel composition based on reaction products of polyols and polyisocyanates, wherein it contains as filler at least one pyrogenically produced oxide of a metal and/or metalloid.
2. A process for the production of the gel composition as claimed in claim 1, wherein a mixture of
- a) one or more polyisocyanates and
 - b) one or more polyol components and
 - c) at least one pyrogenically produced oxide of a metal or metalloid
- is allowed to gel.
3. A process for the production of the gel composition as claimed in claim 2, wherein the isocyanate functionality and the functionality of the polyol component is at least 5.2, preferably at least 6.5, and in particular at least 7.5.
4. A process as claimed in claim 2, wherein the polyol component consists of a mixture of
- a) one or more polyols with hydroxyl numbers below 112 and
 - b) one or more polyol components with hydroxyl numbers in the range from 112 to 600,
- the weight ratio of the component a) to component b) being between 90:10 and 10:90, the isocyanate index of the reaction mixture being in the range from 15 to 59.81, and the mathematical product of the isocyanate

functionality and functionality of the polyol component being at least 6.15.

5. A process as claimed in claim 2, wherein a mixture of
- a) one or more polyisocyanates and
 - 5 b) a polyol component consisting of
 - one or more polyols (b_1) with hydroxyl numbers less than 112 and
 - one or more polyols (b_2) with hydroxyl numbers in the range from 112 to 600 and
 - 10 c) optionally a catalyst for the reaction between isocyanate groups and hydroxyl groups and
 - d) optionally fillers and/or additives known *per se* in polyurethane chemistry, are allowed to gel
 - 15 the weight ratio of the component (b_1) to component (b_2) being between 90:10 and 10:90, the isocyanate index of the reaction mixture being in the range from 15 to 59.81, and the mathematical product of the isocyanate functionality and the functionality of the polyol component being at least 6.15.
- 20 6. A process as claimed in claim 2, wherein the polyol component consists of one or more polyols with a molecular weight between 1000 and 12000 and an OH number between 20 and 112, the mathematical product of the functionalities of the polyurethane-forming components
- 25 being at least 5.2, and the isocyanate index being between 15 and 60.
7. A process as claimed in claim 2, wherein as isocyanates there are used those of the formula

30 $Q(NCO)_n$

in which

n is 2 to 4, and

Q denotes an aliphatic hydrocarbon radical with 8 to 18

35 C atoms, a cycloaliphatic hydrocarbon radical with 4 to

15 C atoms, an aromatic hydrocarbon radical with 6 to 15 C atoms, or an araliphatic hydrocarbon radical with 8 to 15 C atoms.

- 5 8. A use of the gel composition as claimed in claim 1, optionally with a coating, covering or underlining, or as a molded part.

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